



又方向にかいて、はゆ返り係数の式

$$(v_0 \cos \beta - 0)(-1) = v_A \cos(\alpha + \beta) - v_B \dots \textcircled{1}$$

運動量保存より

$$\textcircled{2} \quad m v_0 \cos \beta = m v_A \cos(\alpha + \beta) + m v_B \dots \textcircled{2}$$

$$\textcircled{3} \quad m v_0 \sin \beta = m v_A \sin(\alpha + \beta) \dots \textcircled{3}$$

① 式

$$v_B = v_A \cos(\alpha + \beta) + v_0 \cos \beta$$

② 式より

$$m v_0 \cos \beta = m v_A \cos(\alpha + \beta) + m \{ v_A \cos(\alpha + \beta) + v_0 \cos \beta \}$$

$$\cos(\alpha + \beta) = 0 \quad \therefore \alpha + \beta = \underline{90^\circ}$$

② 式より

$$m v_0 \cos \beta = m v_B \quad \therefore v_B = \underline{v_0 \cos \beta}$$

③ 式より

$$m v_0 \sin \beta = m v_A \quad \therefore v_A = \underline{v_0 \sin \beta}$$